



10/ 780 884

Cajc

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : 6,948,149 B2  
Appl. No. : 10/780,884  
Applicant : Francis Goodwin  
Filed : February 19, 2004  
TC/A.U. : 2858  
Examiner : LEVIN, Naum B.  
Confirmation No. : 9053  
Docket No. : 3000.0037C  
Customer No. : 054500  
Title : Method of Determining the Overlay Accuracy of  
Multiple Patterns Formed on a Semiconductor  
Wafer

**ATTN: Certificate of Correction Branch**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

**Certificate**  
NOV 04 2005  
**of Correction**

Sir:

Transmitted herewith are a Request for Certificate of Correction Under 37 C.F.R. §1.322 (1 page); and a Certificate of Correction Form PTO/SB/44 (3 pages). Due to an error by the U.S. Patent and Trademark office, claims 9-18 in the issued patent are erroneous.

The Commissioner is hereby authorized to charge payment of any additional fees required for the above-identified application or credit any overpayment to Deposit Account No. 05-0460.

Respectfully submitted,

Patrick J. Finnan  
Registration No. 39,189

Hand-delivered: 11/1/05

NOV 08 2005



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : 6,948,149  
Application No. : 10/780,884  
Applicant : Francis Goodwin  
Filed : February 19, 2004  
TC/A.U. : 2858  
Examiner : LEVIN, Naum B.  
Confirmation No. : 9053  
Docket No. : 3000.0037C  
Customer No. : 054500  
Title : Method of Determining the Overlay Accuracy of  
Multiple Patterns Formed on a Semiconductor  
Wafer

**ATTN: Certificate of Correction Branch**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Request for Certificate of Correction Under 37 C.F.R. §1.322**

Sir:

A Certificate of Correction is respectfully requested to correct claims 9-18, which are incorrect in the issued patent due to an error by the U.S. Patent and Trademark Office.

A completed Form PTO/SB/44 is attached herewith showing the correction to be made.

The Commissioner is hereby authorized to charge payment of any additional fees required or credit any overpayment to Deposit Account No. 05-0460.

Respectfully submitted,

Patrick J. Finnan  
Registration No. 39,189

EDELL, SHAPIRO & FINNAN, LLC  
1901 Research Boulevard, Suite 400  
Rockville, Maryland 20850-3164  
(301) 424-3640  
Hand Delivered on: 11/1/2005

NOV 08 2005

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,948,149 B2  
DATED : Sep. 20, 2005  
INVENTOR(S) : Goodwin

Page 1 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Claims 9-18 should read:

9. The method according to claim 7, wherein forming the subsets comprises choosing three or more exposure fields having positions on the test wafer, which are arranged substantially concentric around the center of the test wafer.

10. The method according to claim 7, further comprising defining a concentric area, preferably a ring or an inner circle on the test wafer; and selecting the at least two subsets of exposure fields having positions on the test wafer, which are arranged within the concentric area.

11. The method according to claim 10, wherein an outer ring and an inner circle are defined as concentric areas on the test wafer, and one subset is formed each from exposure fields positioned within the inner circle or from exposure fields formed within said outer ring, and the steps of obtaining shifts, determining the second sets of error values, comparing the first and second sets of error values and selecting a subset in dependence of the comparison results are performed for each of the subsets corresponding to the exposure fields formed within the outer ring and the inner circle, separately.

12. The method according to claim 11, further comprising: combining the selected subsets, which have been selected separately from within the outer ring or from within the inner circle, into one selected subset of exposure fields.

13. The method according to claim 7, wherein the first and/or the second set of correctable or non-correctable error values are each one or a combination of:  
a mean value,  
modeled errors,  
residuals,  
3 sigma variation or  
a total range of the measured shifts.

**MAILING ADDRESS OF SENDER:**

Edell, Shapiro & Finnan, LLC  
1901 Research Blvd., Suite 400  
Rockville, Maryland 20850

PATENT NO. 6,948,149B2

No. of additional copies



This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

**NOV 08 2005**

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,948,149 B2

DATED : Sep. 20, 2005

INVENTOR(S) : Goodwin

Page 2 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

14. The method according to claim 8, wherein the first and/or the second set of correctable or non-correctable error values are each one or a combination of:

a mean value,  
modeled errors,  
residuals,  
3 sigma variation or  
a total range of the measured shifts.

15. The method according to claim 9, wherein the first and/or the second set of correctable or non-correctable error values are each one or a combination of:

a mean value,  
modeled errors,  
residuals,  
3 sigma variation or  
a total range of the measured shifts.

16. The method according to claim 10, wherein the first and/or the second set of correctable or non-correctable error values are each one or a combination of:

a mean value,  
modeled errors,  
residuals,  
3 sigma variation or  
a total range of the measured shifts.

17. The method according to claim 11, wherein the first and/or the second set of correctable or non-correctable error values are each one or a combination of:

a mean value,  
modeled errors,  
residuals,  
3 sigma variation or  
a total range of the measured shifts.

**MAILING ADDRESS OF SENDER:**

Edell, Shapiro & Finnan, LLC  
1901 Research Blvd., Suite 400  
Rockville, Maryland 20850

PATENT NO. 6,948,149B2

No. of additional copies



This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

NOV 08 2005

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

PATENT NO. : 6,948,149 B2

DATED : Sep. 20, 2005

INVENTOR(S) : Goodwin

Page 3 of 3

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

18. The method according to claim 12, wherein the first and/or the second set of correctable or non-correctable error values are each one or a combination of:

a mean value,  
modeled errors,  
residuals,  
3 sigma variation or  
a total range of the measured shifts.

**MAILING ADDRESS OF SENDER:**

Edell, Shapiro & Finnan, LLC  
1901 Research Blvd., Suite 400  
Rockville, Maryland 20850

PATENT NO. 6,948,149B2

No. of additional copies



This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

NOV 08 2005